

Applicant: John E. Stockenberg, et al.  
U.S.S.N.: 09/052,325  
Filing Date: March 31, 1998  
EMC Docket No.: EMC-97-137

**In the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A system having first and second processes residing on first and second computers, respectively, the first and second processes being used with at least one of backup and restore operations, wherein each of said first and said second computers are in communication with both a data storage system which stores data from at least said first and second computers and a network, said system comprising:

at least one first communication mechanism residing on each of said first and second computers for facilitating communications between said first and second processes, that are each used with backup or restore operations, over said network;

a second communication mechanism residing on each of said first and second computers for facilitating communication between said first and second processes through said data storage system; and

means, within said first and second processes, for allowing said first and second processes to determine whether a communication to be facilitated between said first and second processes is from the first communication mechanism or the second communication mechanism and, in response to determining that a communication is from said first communication mechanism, facilitating the communication between the first process and the second process over said network, and, in response to determining that a communication is from said second communication mechanism, facilitating the communication between the first process and the second process through said data storage system.

2. (Original) The system of claim 1, wherein said first and second processes are part of a backup or restore process.

3. (Original) The system of claim 2, wherein said at least one first communication mechanism is a network socket.

Applicant: John E. Stockenberg, *et al.*

U.S.S.N.: 09/052,325

Filing Date: March 31, 1998

EMC Docket No.: EMC-97-137

4. (Previously presented) The system of claim 3, wherein said second communication mechanism is a data storage system socket, and said data storage system socket allows information to be transferred from said first process to said second process through said data storage system.

5. (Original) The system of claim 1, wherein said backup and restore operations are capable of backing up and restoring information from file system or database applications.

Applicant: John E. Stockenborg, et al.  
U.S.S.N.: 09/052,325  
Filing Date: March 31, 1998  
EMC Docket No.: EMC-97-137

6. (Previously presented) A method for assisting with backup and restore operations in a computer system, the method comprising:

(a) establishing at least one first connection over a network, between first and second processes that are each used with at least one of backup and restore operations and that are each residing on different computers, wherein said first connection is configured to be responsively used for communication over a network; and

(b) establishing, in parallel with establishing said at least one first connection, a second connection, through a data storage system, between said first and said second processes, wherein said second connection is configured to be responsively used for communication over said data storage system.

7. (Previously presented) The method of claim 6, wherein step (a) comprises the step of: creating a first pair of communication mechanisms on a designated port of each of said different computers, wherein said first pair includes a first communication mechanism on said designated port of one computer of said different computers and a second communication mechanism on said designated port of another computer of said different computers.

8. (Previously presented) The method of claim 7, wherein step (a) further comprises the steps of:

requesting, with said first communication mechanism of said communication mechanism pair, a connection to said second communication mechanism of said communication mechanism pair; and

in response to said connection request, accepting said connection request.

9. (Previously presented) The method of claim 8, wherein step (a) further comprises the step of:

creating a second pair of communication mechanisms on the designated port of each of said different computers, wherein said second pair includes a first communication mechanism on said designated port of one computer of said different computers and a second communication mechanism on said designated port of another computer of said different computers and wherein

Applicant: John E. Stockenberg, et al.  
U.S.S.N.: 09/052,325  
Filing Date: March 31, 1998  
EMC Docket No.: EMC-97-137

said second pair of communication mechanisms is used for transferring a different type of information than would be transferred over said first pair of communication mechanisms.

10. (Previously presented) The method of claim 9, wherein step (a) further comprises the steps of:

requesting with said first communication mechanism of said second pair of communication mechanisms, a connection to said second communication mechanism of said second pair of communication mechanisms; and in response to said connection request, accepting said connection request.

11. (Previously presented) The method of claim 10, wherein step (b) comprises the steps of:

creating a third pair of communication mechanisms on a second designated port, wherein said third pair includes a first communication mechanism and a second communication mechanism.

12. (Previously presented) The method of claim 11, wherein step (b) further comprises the steps of:

requesting with said first communication mechanism of said third pair of communications mechanisms a connection to said second communication mechanism of said second pair of communications mechanisms; and

in response to said connection request, accepting said connection request.

13. (Previously presented) The method of claim 12, wherein step (b) further comprises the steps of:

receiving information about a group of resources in said data storage system;

in response to receiving information about said group of resources, creating a fourth pair of communication mechanism, wherein said fourth pair includes a first communication mechanism and a second communication mechanism; and

connecting said first communication mechanism and said second communication

Applicant: John E. Stockenberg, *et al.*

U.S.S.N.: 09/052,325

Filing Date: March 31, 1998

EMC Docket No.: EMC-97-137

mechanism of said fourth pair of communication mechanism to each other through said data storage system.

14. (Original) The method of claim 6, wherein said backup and restore operations are for backing up and restoring information from a file system application.

Applicant: John E. Stockenberg, *et al.*  
U.S.S.N.: 09/052,325  
Filing Date: March 31, 1998  
EMC Docket No.: EMC-97-137

15. (Previously presented) A method for assisting with backup and restore operations in a computer system, the method comprising:

establishing a connection, over a network, between a first process and a second process that are each used with backup or restore operations and that are each residing on different computers;

receiving information about a dynamically created communication mechanism over the established connection;

establishing a second connection over the network, on the dynamically created communication mechanism, between said first and second processes;

identifying resources on a data storage system to be used in order to transfer information through said data storage system; and

establishing a connection between said first and second processes through said data storage system.

16. (Original) The method of claim 15, wherein said backup and restore applications are used in conjunction with a database application.

Applicant: John E. Stockenberg, *et al.*  
U.S.S.N.: 09/052,325  
Filing Date: March 31, 1998  
EMC Docket No.: EMC-97-137

17. (Currently amended) A system comprising:

a first computer having a first process residing thereon and a second computer having a second process residing thereon; the first and second processes including at least one of backup and restore operations;

a first communication mechanism residing on each of the first and second computers for facilitating communications between the first and second processes over a network; and

a second communication mechanism residing on each of the first and second computers for facilitating communications between the first and second processes through a data storage system;

wherein the first and second processes are configured to determine [[in]] from which of the first communication mechanism and the second communication mechanism communications ~~from either one of~~ between the first and second processes originate; and

wherein a communication that originates from the first communication mechanism is transmitted between the first and second processes over the network and a communication that originates from the second communication mechanism is transmitted between the first and second processes through the data storage system.

18. (Previously presented) The system of claim 17, wherein said at least one first communication mechanism is a network socket.

19. (Previously presented) The system of claim 18, wherein said second communication mechanism is a data storage system socket, and said data storage system socket allows information to be transferred from said first process to said second process through said data storage system.

20. (Previously presented) The system of claim 17, wherein said backup and restore operations are capable of backing up and restoring information from file system or database applications.